

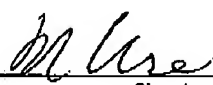
AUG 2 - 2007

Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

Approved for use through xx/xx/200x. OMB 0651-00xx
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) <u>NL030809</u>							
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>8/2/07</u> Signature <u><i>M Ure</i></u> Typed or printed name <u>Michael Ure</u>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Application Number <u>10/563,646</u></td> <td style="padding: 5px;">Filed <u>01/06/2006</u></td> </tr> <tr> <td colspan="2" style="padding: 5px;">First Named Inventor <u>PESSOLANO</u></td> </tr> <tr> <td style="padding: 5px;">Art Unit <u>2183</u></td> <td style="padding: 5px;">Examiner <u>FONG, VINCENT</u></td> </tr> </table>		Application Number <u>10/563,646</u>	Filed <u>01/06/2006</u>	First Named Inventor <u>PESSOLANO</u>		Art Unit <u>2183</u>	Examiner <u>FONG, VINCENT</u>
Application Number <u>10/563,646</u>	Filed <u>01/06/2006</u>								
First Named Inventor <u>PESSOLANO</u>									
Art Unit <u>2183</u>	Examiner <u>FONG, VINCENT</u>								
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p>									
I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) <input type="checkbox"/> attorney or agent of record. Registration number _____ <input checked="" type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 <u>33,089</u>		<div style="text-align: center;">  Signature <u>Michael Ure</u> Typed or printed name <u>408 674-0271</u> Telephone number <u>8/2/07</u> Date </div>							
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.									
<input type="checkbox"/> *Total of _____ forms are submitted.									

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE **RECEIVED**
CENTRAL FAX CENTER

AUG 2 - 2007

In re application of
PESSOLANO

Atty. Docket
NL030809

Serial: 10/563,646

Group Art Unit: 2183

Filed: 01/06/2006

Examiner: FONG, VINCENT

METHOD AND SYSTEM FOR BRANCH PREDICTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE—PRE-APPEAL REVIEW

Sir:

The following Remarks are responsive to the Office Action of June 19, 2007.

REMARKS

The Office Action of June 19, 2007 has been carefully considered. Reconsideration in view of the present remarks is respectfully requested.

The present invention relates to a method branch prediction in a data processor. Exemplary claim 8 recites:

8. A method for predicting the outcome of a conditional branch within a computer system, the method comprising the steps of identifying (105) the occurrence of a conditional branch, obtaining (106) data providing a measure of system activity since a previous branch, comparing (110) said data with data relating to previous system activity, and predicting (108) the branch outcome based on such comparison.

Claim 1 claims a corresponding apparatus.

As described in the specification, the measure of system activity may be the number of state changes that take place within the elements that comprises the circuitry of the processor, for example (Specification, page 5, lines 11-22).

Claims 1-8 were rejected as being anticipated by Farcy. The rejection states:

Farcy discloses means for obtaining data providing a measuring of system activity, measure by definition means an evaluation or a basis of comparison per The American Heritage Dictionary of the English Language, Fourth Edition, the program windows in Farcy provides the tag

of the branch instruction for branch prediction which is used basis of comparison to determine whether the executing instruction (system activity) is a branch instruction. And the system of Farcy contains means to make such comparison and access the anticipation table if instruction is tagged. In addition the anticipated table containing data relate to branch result of previously executed branches in the branch window, therefore it is data relating to previous system activity.

This rejection is respectfully traversed.

Farcy's system is shown in Figure 9 thereof. As described in Section 3, the third paragraph thereof, Farcy isolates and duplicates a branch flow that will compute a branch condition in advance (Figure 9, Branch Window) and then forwards the results to the normal flow (Figure 9, Program Window). The results are stored in the Anticipation Table of Figure 9. To compute the branch condition in advance, values are used from a Value Prediction Table as illustrated in Figure 9.

Nowhere does Farcy teach or suggest obtaining data providing a measure of system activity since a previous branch, comparing it to data relating to previous system activity, and performing branch prediction based on the comparison.

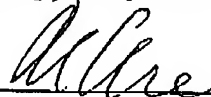
As a starting point, it is unclear how the program window of Farcy can be read as "providing a measure of system activity since a previous branch." *The program window simply represents normal execution of the program on the processor.* The program refers to the anticipation table to resolve branch conditions. The anticipation table does not store data providing a measure of system activity since a previous branch. Rather, the anticipation table stores a computed branch result based on look-ahead execution of branch-related instructions.

It is further unclear how Farcy can be read as teaching comparison of 1) data providing a measure of system activity since a previous branch, to 2) data relating to previous system activity. The final rejection seems to suggest that the "comparison" in Farcy is the recognition by the executing program within the program window that an

instruction is a branch instruction for which branch anticipation is performed, hence calling for a read of the anticipation table to resolve the branch. This recognition may be assumed to be, as described in the final rejection, by means of tags associated with branch instructions for which branch anticipation is performed. The "comparison" therefore is "TAGGED or NOT TAGGED?" How this somehow amounts to comparing 1) "data providing a measure of system activity since a previous branch," with 2) "data relating to previous system activity," is inscrutable.

Accordingly, it may be seen that Farcy does not anticipate the invention of claims 1 and 8. Withdrawal of the rejections and allowance of claims 1-8 is respectfully requested.

Respectfully submitted,



Michael J. Ure, Reg. 33,089

Dated: August 1, 2007